

CLAIMS

I claim:

1      *Sub* 1. A transmission for a wind generator, the transmission comprising  
2      a housing,  
3      a rotor supported in said housing,  
4      a multi-stage planetary transmission stage driven by said rotor, and  
5      a spur gear stage driven by said multi-stage planetary transmission stage, said  
6 spur gear stage driving at least one generator.

7  
8      2. A transmission as in claim 1 further comprising  
9      an annular gear carrier fixed directly to said rotor,  
10      an annular gear fixed to said annular gear carrier, said multi-stage planetary  
11 transmission stage including said annular gear.

12  
13      3. A transmission as in claim 1 further comprising  
14      a pair of sliding contact bearings supporting said rotor in said housing, at least one  
15 of said bearings absorbing axial forces,  
16      an oil pump for raising said bearings hydrostatically, and  
17      means for controlling said oil pump so that said bearings can be switched between  
18 partially and fully hydrodynamic lubrication.

19      4. A transmission as in claim 2 wherein said rotor and said annular gear  
20 carrier are formed integrally.

1                    5.        A transmission as in claim 2 wherein said annular gear carrier is fitted to  
2        said rotor in at least one of a form fit and a press fit.

1                    6.        A transmission as in claim 2 wherein said annular gear is fixed to said  
2        annular gear carrier by a toothed coupling.

1                    7.        A transmission as in claim 1 wherein said rotor is formed integrally with a  
2        rotor head which holds the blades driven by the wind.

1                    8.        A transmission as in claim 1 further comprising  
2                    a bearing cover secured to said housing, and  
3                    bearings for said spur gear stage supported in said bearing housing.

1                    9.        A transmission as in claim 1 wherein said planetary transmission stage  
2        comprises gears having helical teeth.

1                    10.       A transmission as in claim 1 wherein said planetary transmission stage  
2        drives said spur gear stage via a sun gear carried on a sun gear shaft, said sun gear shaft being  
3        mounted for resilient axial movement.

1                    11.       A transmission as in claim 10 further comprising a sensor which records  
2        the axial force of the sun gear shaft.

1                    12.       A transmission as in claim 2 wherein said annular gear has internal teeth  
2        which are surface-hardened.

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- 1 13. A transmission as in claim 1 further comprising  
2 a flanged housing surrounding said spur gear stage, and  
3 at least two output shafts arranged in said housing and driving respective  
4 generators, each said output shaft having a pinion gear which engages said spur gear stage.

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